

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Craig Fischer (Registration No. 42,535) on 02/18/05.

The application has been amended as follows:

In claim 1, on line 1, change "determining a orientation" to "determining an orientation".

Cancel claims 18-23 and 30-33.

This application is in condition for allowance except for the presence of claims 18 to 23 and 30 to 33 non-elected without traverse. Accordingly, claims 18-23 and 30-33 have been cancelled.

### ***Reasons for Allowance***

2. The following is an examiner's statement of reasons for allowance:

Claim 1 requires a position comparator that compares the head position and the face position to each other to obtain the orientation. This feature in combination with the other elements of the claim is neither disclosed nor suggested in the prior art of record. Claim 11 also recites a similar limitation. Claims 2 and 3 depend from claim 1. Claims 12-17 are dependant from claim 11.

Claim 4 requires a position comparator that uses the angle between the head position and face position to determine facial pose. This feature in combination with the

other elements of the claim is neither disclosed nor suggested in the prior art of record.

Claim 24 also recites a similar limitation. Claims 5-10 are dependent from claim 4 and claims 25-29 are dependent from claim 24.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***References Cited***

3. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

Toyama (U.S. Patent 6,806,898) teaches tracking a head from within a stream of video images (column 5, lines 65-67). The images are taken by a camera sitting on top of a monitor in front of a user (Figure 2). Also disclosed is determining the position of the face (column 6, line 57). Also disclosed is finding the head pose relative to the display (column 6, lines 54-55).

Zhou (U.S. Patent 5,596,362) teaches using thresholds to determine whether a person is watching a display (figure 11, 1115 and 1125). Also disclosed is detecting the center of the face (column 19, lines 52-55). Here the face is modeled using an ellipse and the major and minor axes are determined. If one knows these two lines, one of ordinary skill in the art knows that the center of the ellipse (and therefore the face) is at

the intersection of these lines. If considering a centerline instead of the center point, either axis would suffice, depending on which orientation it is being viewed from.

Bober (U.S. Patent Application US 2004/0070666 A1) discloses detecting the position of the head or face and tracking the face as it moves (paragraph 0021, lines 4-7).

Peters (U.S. Patent Application US 2002/0085738 A1) discloses determining the location of a user's face in 2 and 3 dimensions i.e. all forms of facial pose (paragraph 0050, lines 6-11).

Horvitz (U.S. Patent 6,499,025) discloses fusing multiple sensing modalities to find the position of a human head (column 3, lines 35-38).

### ***Contact Details***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashutosh Upreti whose telephone number is (703) 306 4087. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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